REMARKS

Claims 1-25 and 30 were withdrawn in the Office Action. Claims 1-25 and 30 are canceled herein without prejudice to pursue them in a continuation or divisional patent application. Claims 26, 27 and 28 have been amended herein. No new matter is added in these amendments and support is found on page 12, paragraph 3, and page 14, paragraphs 1 and 2 of the application as filed. Claims 26-29 and 31-49 are now pending. No new matter has been added in the new claims as they incorporate elements of the cancelled claims. Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and following remarks.

Objections

The amendment to Claim 26 overcomes the objection.

Rejection

The Office Action rejects claims 26-29 under 35 U.S.C § 102(b) as lacking novelty over Zhang et al., *Analytica Chimica Acta* 388 (1999) 71-78 (hereinafter "Zhang"). Applicants respectfully traverse and assert that Zhang does not disclose an electrically deposited sol-gel comprising one or more biomaterials.

The presently claimed method facilitates the controlled deposition of materials onto the surface of electrodes, while at the same time allowing biological materials to be entrapped within the sol-gel. This is discussed in more detail in the passage bridging pages 3 and 4 of the application as published.

The article by Zhang et al discloses the production of a biosensor utilizing a relatively large glassy carbon electrode (GCE). As shown in paragraph 2.3 on page 73 of Zhang, the glassy carbon electrode was coated with a drop of the sol-gel mixture and left for at least 24 hours at +4°C in a refrigerator. This allows the sol-gel to dry. Applicants respectfully assert that Zhang's technique produces inconsistent results and lacks the uniformity of the deposited sol-gels produced by the presently claimed methods. Sol gel mixtures inevitably produce drops which

will have a surface tension resulting in sol gel layers of inconsistent thickness. The drop size will not be consistent, no matter how carefully the device is made.

Zhang's method requires the presence of a copolymer of polyvinyl alcohol grafted with 4-vinyl pyridine. It is this copolymer that allows the attachment of the material to the GCE. That technique is very specific for GCE-type electrodes and would not be suitable for, for example, platinum or other materials. Applicants respectfully assert that the presence of that hydrophobic copolymer alters the structure of the sol-gel material. Applicants further respectfully assert that the way that the material is deposited means that the material is physically distinguishable from sol-gels electrodeposited by the methods of the presently claimed invention.

The drop deposition of sol-gels onto microneedles and microelectrodes is not suggested by Zhang. Zhang's drop deposition results in considerable inconsistencies in the structure of the final coating, thus rendering the technique unacceptable as a method of producing such microneedles and microelectrodes, as claimed.

Accordingly, Applicants respectfully assert that Zhang does not anticipate Applicants' claims and request withdrawal of the rejection. These amendments and remarks fully address the objection and the rejection in the Office Action mailed September 16, 2009.

CONCLUSION

In view of the foregoing amendments and remarks, a Notice of Allowance is respectfully solicited. The Examiner is invited to contact the undersigned attorney at 404.745.2470 or J. Clinton Wimbish at 704.338.5021 to discuss any matter related to the present application.

This response is filed together with a petition for a one month extension of time and the required fee. No additional fees are believed due; however the Commissioner is hereby authorized to charge any additional fees that may be required or to credit any overpayment to Deposit Account number 11-0855.

Respectfully submitted,

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